

# The determinants of voluntary strategy disclosure: an international comparison

Voluntary  
strategy  
disclosure

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## Abstract

**Purpose** – The purpose of this paper is to examine the roles of country-level characteristics versus firm-level characteristics in explaining variations in firms' voluntary strategy disclosures.

**Design/methodology/approach** – Strategy disclosure in annual reports is measured using an index of 40 items derived from the strategy literature. The sample is 204 large companies from 12 Asian and European countries in 2005. The disclosure index is subdivided into four underlying latent constructs using principal components analysis. The authors then use OLS regression to test whether total disclosure score, and the latent constructs are associated with country-level characteristics and firm-level characteristics.

**Findings** – The authors find that total strategy disclosures are more prevalent in stakeholder-oriented countries, in countries with greater levels of financial transparency, but are less prevalent in countries with a culture of secrecy, and strategy disclosures are more likely to occur in companies with greater economic incentives to disclose, with a Big 4 auditor or which are listed in New York. These findings also occur but not as consistently with the four latent constructs.

**Research limitations/implications** – The sample used in this paper comprises large public companies, so the findings may not be generalisable to all companies. Nevertheless, the findings demonstrate that both country- and firm-level variables matter in explaining voluntary strategy disclosure.

**Practical implications** – The IASB released an IFRS Practice Statement in 2010, which recommends, but does not require, disclosure of information about corporate strategy in Management Commentary statements. The findings of this paper may help inform the issue of whether regulators should make strategy disclosures mandatory.

**Originality/value** – The paper contains the first detailed examination of the roles of country-level characteristics versus firm-level characteristics in explaining variations in corporate voluntary strategy disclosures.

**Keywords** Voluntary disclosure, Determinants of disclosure, Strategy disclosure

**Paper type** Research paper

## 1. Introduction

This paper examines how well country-level characteristics and firm-level characteristics explain variations of strategy disclosures in corporate annual reports. A firm's success is influenced by its strategy. Understanding a firm's strategy is important for users of financial reports, because strategy choices provide the context in which to understand and judge the financial performance and position of the company. Because of the nexus between the strategies a firm pursues and the ensuing financial results, disclosures of strategy information should be important for the users of annual reports[1].

Regulators have indicated the importance of strategy disclosures. An IASB Practice Statement (IASB, 2010) recommends that information about corporate strategy be disclosed



in Management Commentaries, although such disclosures are voluntary. In addition, the Global Reporting Initiative recommends that companies disclose their strategies not only for corporate responsibility reporting but also with respect to economic performance (GRI, 2011, p. 20). Again such disclosures are voluntary.

Strategy has been defined in terms of intentions. For example:

[Strategy is] the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals. (Chandler, 1962, p. 13)

Strategy can be highly sensitive and proprietary, so why would a company disclose any information about it? Disclosure matters in modern capital markets because of the *information asymmetry problem* and the *agency problem*. Among the potential solutions to these problems are mandatory and/or voluntary disclosures (Healy and Palepu, 2001). One such voluntary disclosure is of strategy. Ferreira and Rezende (2007) show analytically that firms might make credible voluntary strategy disclosures to encourage investment, to preserve firm reputation and to increase firm value.

However, several economic and institutional factors determine whether current disclosure practices eliminate the information asymmetry and agency problems (Healy and Palepu, 2001). These factors include the ability to write, monitor and enforce contracts, regulatory imperfections and the corporate control market. Here important cross-country differences exist. Ball (2006) points out that widespread adoption of International Financial Reporting Standards (IFRS) globally may not produce high quality financial statements in practice because of country-level political and legal barriers. On the other hand, a long stream of literature reports that various firm-level characteristics are often associated with corporate disclosure levels. These include size, leverage, profitability, auditor type, listing status (Ahmed and Courtis, 1999).

Whether firm-level or country-level determinants are the more important is unsettled. One view is that firm-level and country-level disclosure determinants are complements: both will be strong in highly developed countries but not in poorly developed countries (Doidge et al., 2007). Another view is that firm-level and country-level determinants are substitutes: firm-level determinants will be more (less) important in less (more) developed countries (Durnev and Kim, 2005). Both views assume that highly developed countries have effective regulatory infrastructure to ensure reliable financial reporting, while poorly developed countries do not.

Our paper investigates whether country-level and firm-level characteristics explain variance in companies' voluntary strategy disclosure internationally and which level predominates. We use hand-collected data for 2005 covering 204 large companies from 12 countries: Belgium, Denmark, France, Germany, Hong Kong, Japan, Malaysia, Netherlands, Norway, South Korea, Sweden and the UK. These countries differ in institutional systems and culture. Our sample comprises the 17 largest companies in each country. Despite the small per-country sample size, there is substantial variation in strategy disclosures within and between countries.

We find that total strategy disclosures are more prevalent in stakeholder-oriented countries and in countries with greater levels of financial transparency, but are less prevalent in countries with a culture of secrecy. Strategy disclosures are also more likely in companies with greater economic incentives to disclose, with a Big 4 auditor, and with securities listed on the New York Stock Exchange. Overall, firm-level characteristics complement, rather than substitute for, country-level variables in explaining variation in strategy disclosure.

Our paper makes several contributions. First, we add to the fledgling literature on strategy disclosure and we bring together material from the strategy and disclosure literatures. [Santema and Van de Rijt \(2001\)](#) describe the extent to which Dutch firms disclosed their strategy in their 1997 and 1998 annual reports. [Santema et al. \(2005\)](#) predicts and investigate how firms from five European countries rank on strategy disclosure based on a composite of each country's rules for board composition, equity ownership structures, market for corporate control, legal system and culture. At firm level, only size is controlled for. Compared to [Santema et al. \(2005\)](#), we have specific predictions about, and measures of, country-level and firm-level variables that likely influence voluntary strategy disclosure, and we also cover more countries.

Second, our study adds to the literature examining the impact of country-level versus firm-level determinants of disclosure. Third, we examine a type of voluntary disclosure (strategy) which is partly forward-looking and whose determinants may thus differ from those of other disclosure items – [Meek et al. \(1995\)](#) point out that determinants of voluntary disclosure could differ by specific type of voluntary disclosure. In addition, studies of the determinants of *qualitative* disclosures, such as strategy disclosure, are comparatively few.

## 2. The meaning of strategy disclosure

Voluntary strategy disclosures most likely would cover specific actions taken to implement a firm's strategy, rather than an abstract notion of strategy. Only such concrete actions are observable, so they must proxy for a firm's (unobservable) strategy. Measuring and classifying strategy is thus difficult and the literature contains many ways to do it. We started with [Besanko et al.'s \(2004\)](#) four strategy dimensions:

- (1) boundaries of the firm;
- (2) market and competition;
- (3) positions and dynamics; and
- (4) internal organization.

And then a fifth dimension of *Forecasts* was added.

The *firm's boundaries* define what the firm does, and extend in three directions: horizontal, vertical, and corporate ([Rumelt, 1974](#)). Horizontal boundaries refer to how much of the product market the firm serves. Vertical boundaries are about how the firm organizes itself along the value chain, versus what it purchases from market. Corporate boundaries refer to the set of distinct businesses the firm competes in.

To formulate and execute successful strategies, firms must understand the nature of the *markets* in which they compete and their degree of *competition*. Within an industry, *competition* is driven by:

- threat of entry by new competitors;
- intensity of existing competition;
- pressure from substitute products;
- buyers' bargaining power; and
- suppliers' bargaining power ([Porter, 1980](#)).

How the firm competes is an important aspect of strategy ([Porter, 1985](#)), called *competitive position and dynamics*. For example, does the firm compete via low costs or because its product/service is highly differentiated? How does the firm accumulate its resources or create new competitive advantages?

A firm also needs to *organize itself internally* to carry out its strategies. This determines how resources and information flow through the firm, and whether the goals of employees and overall firm goals are aligned (Chandler, 1962).

To the foregoing categories, we add a fifth category of *projections and forecasts* of profit, sales, etc., which is an expected outcome of the firm's current strategy choices.

### 3. Hypothesis development

Hypotheses about the determinants of voluntary disclosure have been derived from agency theory, signaling theory, proprietary cost theory, stakeholder theory and legitimacy theory (Cotter *et al.*, 2011), as well as political cost reduction (Belkaoui and Karpik, 1989); proprietary cost and related cost-benefit analyses (Verrecchia, 1983); and facilitating capital raising (Firth, 1980). These theories and explanations are conceptually consistent, meaning that if one is correct, the others may also be correct (Morris, 1987). As such, we make use of several of these theories and explanations in developing our testable hypotheses.

#### 3.1 Country-level determinants

Nations differ in their accounting and disclosure systems (Nobes, 2013). Many studies of international differences in accounting practices use La Porta *et al.*'s (1998) distinction between common law and code law countries. La Porta *et al.* argue that in common law countries, investors and creditors are better protected and laws are better enforced than in code law countries, and in consequence, stock markets are larger and companies are more widely held by outsiders. Various accounting studies find that firms in common law countries have better "accounting quality" (Hope, 2003). However, the common law/code law distinction masks a rich tapestry of differences across countries and, in some cases, may be misleading (Lindahl and Schadewitz, 2013). Therefore, we replace the common law/code law distinction with other country-level factors that are more directly associated with corporate disclosures.

*3.1.1 Institutional clusters.* Leuz *et al.* (2003) combine La Porta *et al.*'s common/code legal differences with the following differences between countries that more directly influence financial reporting: Stock market capitalization, number of listed firms, IPOs, ownership concentration, anti-director rights, a disclosure index, efficiency of the judicial system, rule of law and a corruption index. Three country clusters are derived. Cluster 1 countries, labelled "outsider-oriented", rank higher than other countries on all the foregoing institutional differences except rule of law and corruption. Seven common law countries and one code law country[2] appear in Cluster 1 and they are countries in which outside equity holders are most important. Clusters 2 and 3 countries, labelled "insider oriented", differ from Cluster 1 because they are less oriented towards outside equity holders, but are more focused on stakeholders, broadly defined. Cluster 2 comprises 11 code law countries and two common law countries[3]. Cluster 3 comprises seven code law and three common law countries[4].

We argue that companies in Clusters 2 and 3 are more likely to voluntarily provide strategy disclosures. In these countries, a large group of stakeholders have an interest in companies, and shareholders are not necessarily the dominant group (Simnett *et al.*, 2009). Strategy disclosures tend to be qualitative, are focused on firms' so-called "soft assets" and are directed at a broader group of stakeholders than just investors alone. We argue that such voluntary strategy disclosure will likely appeal to all outside stakeholder groups. In accordance with stakeholder theory, companies have incentives to disclose financial and nonfinancial information to these stakeholder groups to manage their relationships with them (Van der Laan Smith *et al.*, 2005). We hypothesize that:

H1. Voluntary strategy disclosures will tend to be made by companies from stakeholder-oriented countries.

3.1.2 *Country-level financial transparency.* Bushman *et al.* (2004) derive a country-level financial transparency score across 46 countries (plus an independent governance transparency score). Six variables load positively on the financial transparency score. In descending order, they are: a disclosure measure based on five accounting issues (R&D expenses, capital expenditure, segment data, subsidiary information and accounting policies); the number of analysts following each country's largest 30 companies in 1996; a governance measure covering six corporate governance issues; a timeliness measure based on reporting frequency, number of disclosed items and consolidation of interim reports; the average rank of the countries' media development 1993 to 1995; and a measure, based on two accounting issues (consolidation accounting and discretionary reserves). Financial transparency is not associated with legal origin (Bushman *et al.*, 2004). Financial transparency is about how informationally open companies are in different countries. Higher financial transparency countries are more likely to have companies with higher levels of voluntary disclosure, including strategy disclosure. We hypothesize that:

H2. Voluntary strategy disclosures will tend to be made by companies from more financially transparent countries.

3.1.3 *Culture.* Accounting is affected by a country's culture. Hofstede (1980) argues that culture includes a set of societal values that drive institutional form and practice. Using Hofstede's original four cultural values of uncertainty avoidance, power distance, individualism and masculinity, Gray (1988) identified four accounting-related cultural dimensions. The dimension of "secrecy versus transparency" is of most interest for disclosure studies. Gray (1988, p. 11) hypothesized that:

[. . .] the higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy.

Firms in more secretive countries will be less likely to voluntarily disclose information. We hypothesize that:

H3. Companies in countries with higher secrecy will tend to have lower voluntary strategy disclosures.

### 3.2 Firm-level determinants

3.2.1 *Firm-level disclosure propensity.* Although country-level factors influence corporate disclosures, a number of firm-level factors are also associated with voluntary corporate disclosures. Firms have incentives to make voluntary disclosures to reduce information asymmetry and agency costs arising from the separation between outside owners and inside managers (Jensen and Meckling, 1976) or to signal their superior quality (Morris, 1987). Political costs may also explain voluntary disclosure decisions because firms may be trying to deflect critical attention of external parties such as regulators and unions (Belkaoui and Karpik, 1989). Firms may also voluntarily disclose more when they approach the capital market for equity financing (Firth, 1980). Finally, proprietary costs, such as disclosure preparation costs and giving valuable information to competitors, may lead firms to disclose less (Verrecchia, 1983).

These theoretical explanations for disclosure are linked up to several firm-level empirical proxies. Disclosures often vary positively with firm size, because larger firms may:

- have higher political costs (Watts and Zimmerman, 1978) and disclose more to reduce political pressure;
- face less proprietary cost because of relatively lower cost of preparing and disseminating strategy disclosure compared to smaller firms;
- have a stronger competitive position and may, therefore, suffer less potential disadvantage from strategy disclosures compared to smaller firms;
- have more potential conflicts among owners, creditors and managers that could be reduced by more disclosure (Jensen and Meckling, 1976);
- have larger analyst following and, therefore, experience greater demand for information (Lang and Lundholm, 1993); or
- simply have more to tell.

Furthermore, firms with many segments may disclose more:

- to satisfy the information needs associated with diversified activities (Zarzeski, 1996); and
- because the competitive costs of disclosure may decrease as a firm becomes more diversified.

Disclosure is also likely to be related to the firm's profitability, return, leverage and whether equity or debt will be raised. More profitable firms may signal this to the market via higher disclosure (Kent and Ung, 2003), but Lang and Lundholm (1993) contend that a firm's absolute performance might be neutral or even negatively associated with disclosure. Zarzeski (1996) predicts that disclosure decreases with leverage because creditors may be able to obtain private information. Alternatively, potential wealth transfers from fixed claimants (i.e. creditors) to residual claimants (i.e. shareholders) increase as leverage increases (Hossain *et al.*, 1995), and thus, firms may disclose more in order to reduce the agency cost of debt. Further, firms that will be raising capital face similar incentives. If management provides disclosure to reduce the agency costs of equity and debt, then the incentive to disclose information is strengthened if the company seeks to raise equity or debt.

The foregoing explanations are conceptually consistent (Morris, 1987). Therefore, we argue that their empirical proxies can legitimately be formed into a single underlying latent variable, which we label firm-level "Disclosure Propensity". Following Daske *et al.*, (2013), we measure Disclosure Propensity as the first principal component from a principal components analysis (PCA) of firm size, leverage, number of business segments, equity raised and debt raised in the past year, change in profitability. We hypothesize that:

- H4. Voluntary strategy disclosures will tend to be made by companies with higher disclosure propensity scores.

3.2.2 *New York listing.* Disclosure may vary with stock-exchange listings as firms cross-listed in multiple capital markets – especially on prestigious capital markets – may disclose more because they face additional demands for information as the number of shareholders becomes larger and more dispersed (Leuz, 2003). Also, overseas cross-listing acts as a moderating variable on the influence of country-level disclosure incentives and firm-level

disclosure propensity. We use listing on the New York Stock Exchange (NYSE) as a proxy for multi-country listing[5]. We hypothesize that:

*H5.* Voluntary strategy disclosures will tend to be made by companies that are listed on the NYSE.

*3.2.3 Auditor type.* An association between firms' strategy disclosure and the type of auditor is expected, even though auditing of strategy disclosures is unlikely. First, companies with more exposure to capital markets or with more outside shareholders are more likely:

- to use a Big 4 auditor to enhance credibility of financial reports (Kent and Ung, 2003); and
- to voluntarily disclose non-financial information like strategy.

Second, Big 4 auditors install better reporting systems and may, therefore, have a positive effect on disclosure in general (Firth, 1979). We hypothesize that:

*H6.* Voluntary strategy disclosures will tend to be made by companies with a Big 4 auditor.

#### 4. Sample selection and data collection

The sample of 204 firms used in this study consists of the 17 largest firms by market capitalization in 2005 in each of 12 countries: Belgium, Denmark, France, Germany, Hong Kong, Japan, Malaysia, Netherlands, Norway, South Korea, Sweden and the UK. The year 2005 has the advantage of being close to the time period covered by the studies that generated our institutional clusters (Leuz *et al.*, 2003), country-level financial transparency (Bushman *et al.*, 2004) and country secrecy measures. The year 2005 also predates the IASB Practice Statement (2010) and is a time when the uptake worldwide of GRI guidelines was comparatively modest (KPMG, 2005). Of our 12 countries, 9 adopted IFRS in 2005. If IFRS disclosures are a substitute for voluntary disclosures, then IFRS adoption biases against our hypotheses. However, IFRS adoption appears to have little influence on our results.

Each company's 2005 annual report was obtained from either Mergent Online or the firm's website. If the annual report was not in English or the firm was a financial institution (SIC codes 6000-6999), then the firm was discarded and the next largest firm chosen.

##### 4.1 The dependent variable: strategy disclosure

A list of items that firms might disclose about strategy was compiled after an analysis of the strategy literature. This preliminary set of items was pilot-tested and revised in two rounds on a sample of six firms. We excluded items that did not apply to all firms because they required an antecedent event, for example, a merger.

The final checklist[6] of 40 items covers the five dimensions of strategy discussed earlier. Annual reports were read in full and the total strategy disclosure score from these 40 items is additive and unweighted (items are coded "1" if disclosed, "0" otherwise)[7].

The five strategy dimensions, because they are theoretical and inexact, were only intended as a starting point. To reduce the checklist items to a smaller number of latent variables, we ran Principal Components Analysis (PCA) on index items[8]. After inspecting scree plots of eigenvalues from the unrotated factor solution (Hair *et al.*, 1998) and conducting parallel analysis (Zwick and Velicer, 1986), four components were chosen all

with eigenvalues greater than one. Applying Promax oblique rotation and focusing on variable loadings of at least 0.3 (Bryant and Yarnold, 1995), we labeled the four components:

- (1) internal organization and competition;
- (2) forecasts;
- (3) goals and objectives; and
- (4) boundaries (See Table II).

Factor scores from these are used in subsequent analyses together with the disclosure index total score.

#### 4.2 Independent variables

For *country-level* variables, *Country Institutional Clusters* come from Leuz *et al.* (2003), and *country-level financial transparency* is from Bushman *et al.* (2004). We measured *Secrecy* as the first principal component from a PCA of Hofstede's cultural dimensions of power distance (PDI); individualism (INV); masculinity (MAS); and uncertainty avoidance index (UAI) across 78 countries on Hofstede's website[9]. The first principal component after Promax rotation loaded positively on PDI and UAI, and negatively on INV and MAS, consistent with Gray's (1988) argument[10].

Firm-level variables were hand-collected from annual reports. *Size* is measured as the natural log of total assets. *Leverage* is total liabilities divided by total assets. *Change in profitability* is change in the Return on Asset ratio (net income after tax over total assets) from year t-1 to year t. *Buseg* is the number of business segments. Dichotomous variables (1 present, 0 absent) denote whether the company *raised equity* or *raised debt* in the subsequent year; whether the firm employed a *Big 4 auditor*, and if the firm was *cross-listed* on the NYSE. Data about cross-listing on the NYSE came from The Bank of New York's website[11]. Firm-level *Disclosure Propensity* was calculated as the first principal component of a PCA of firm size, leverage, change in profitability, number of business segments, equity raising and debt raising[12].

#### 4.3 Regression analysis

We use OLS regression to test our hypotheses. However, because the theoretically correct relationship between disclosure and the independent variables is unknown (Lang and Lundholm, 1993), we transform continuous independent variables to normal scores using the Van der Waerden approach[13] (Cooke, 1998).

## 5. Results

### 5.1 Descriptive results

Table I shows the average total disclosure score is 22.725 out of 40 (56.82 per cent) with a standard deviation of 4.687, a minimum of 8 and a maximum of 32. *Within* countries, standard deviations of total disclosure scores lie between 3.1 and 6.1. The difference between maximum score and minimum score in each country ranges from 9 for The Netherlands to 21 for Malaysia (both out of 40). Also, there is significant variation in total disclosure means *between* countries, as shown by the significant F and H statistics. So even though the sample size per country is small, there is sufficient variation in the total disclosure score within and between countries for meaningful analysis.

Cronbach's alpha for the 39 index items that vary across companies is 0.724, which is an acceptable level (Hair *et al.*, 1998, p. 92). Table II shows eight strategy items present in over 80 per cent of annual reports. All sample companies provide an explanation of their product



Country	N	Disclosure score mean*	SD	Minimum	Maximum	Range (Maximum – Minimum)	Total assets (US\$m Mean)
Full sample	204	22.725	4.687	8	32	24	
Belgium	17	20.118	4.24	8	28	20	5,724
Denmark	17	23.529	4.001	17	31	14	5,585
France	17	24.118	4.328	13	30	17	43,506
Germany	17	26.647	3.141	21	32	11	78,269
Hong Kong	17	20.824	4.29	13	30	17	21,079
Japan	17	22.706	4.312	15	28	13	9,090
Korea	17	22.353	3.967	16	29	13	14,307
Malaysia	17	18.176	6.023	8	29	21	1,900
Norway	17	21.706	4.74	13	28	15	7,283
Sweden	17	25.353	3.277	19	31	12	10,062
Netherlands	17	24.176	3.107	20	29	9	11,989
UK	17	23	4.609	14	29	15	21,205

Statistical test of differences between country disclosure means

One-way independent ANOVA: F-Statistic (*p*-value):

5.101 (0.001)

Kruskal–Wallis: *H*-Statistic (*p*-value):

43.316 (0.001)

**Table I.**  
Total disclosure score – descriptive statistics

**Note:** \*All scores are out of 40

(s) and/or service(s) (100 per cent)[14], and most firms provide a discussion of industries (99.02 per cent) and geographic areas (97.55 per cent) they operate in. Other disclosure items that are present in many annual reports are customer relationships (92.65 per cent), concrete strategy examples from past year (92.16 per cent), level of competition (87.75 per cent), future opportunities (87.25 per cent), technology used (83.33 per cent) and quality control (80.88 per cent).

Table II also shows that only 33 out of the 40 checklist items have factor loadings above |0.3|, so the remaining seven items are of relatively low importance in explaining variation in strategy disclosure. The component *Internal Organization and Competition* has an eigenvalue of 3.91 and explains 10.02 per cent of the variance in the raw data. The component loads with scores above 0.3 on 15 checklist items of which four are about internal organization, four about competitive position and dynamics, and two about the nature of the firm's competition (Table II, Panel A). *Internal Organization and Competition* is thus about the concrete results of past strategy. The component *Forecasts* has an eigenvalue of 2.97, explains 7.62 per cent of the variation in the raw data and loads above 0.3 on five of the six forecast disclosure items in the checklist (Table II, Panel B). The component *Goals and Objectives* has an eigenvalue of 2.20, explains 5.63 per cent of the variation in the raw data and loads above 0.3 on eight checklist items of which two are directly about goals and objectives and two are examples of past and projected strategies (Table II, Panel C). The component *Boundaries* has an eigenvalue of 1.82, explains 4.65 per cent of the variation in the raw data and loads above 0.3 on five index items, of which three are about firm's boundaries (Table II, Panel D). Pearson correlations between total disclosure score and the four components are: *Internal Organization and Competition* 0.795; *Forecasts* 0.513; *Goals and Objectives* 0.469; and *Boundaries* 0.104.

Descriptive statistics for country-level and firm-level independent variables appear in Table III. The average leverage is 0.564, but the maximum score of leverage is above one, suggesting that some of the companies in the sample have negative equity. The average

**Table II.**  
Disclosure checklist  
components

Disclosure item ranked by factor loading	Factor loadings	% of firms disclosing
<i>Panel A: Internal organization and competition</i>		
<i>Structure:</i> Disclosure on which activities are centralization and decentralization and why the activities are so	0.560	47.55
<i>Technology:</i> Disclosure about the technology used	0.530	83.33
<i>Competition:</i> Disclosure regarding the competitiveness/rivalry/intensity of rivalry within the industry and/or geographical location and a brief explanations why this is so	0.485	87.75
<i>Competition:</i> Disclosure of the name of any of the major competitors	0.484	23.04
<i>Dynamics:</i> Disclosure of early mover advantages such as brand reputation, experience and learning	0.483	60.29
<i>Market:</i> Disclosure regarding future opportunities; what these opportunities are and how it might affect the company	0.483	87.25
<i>Horizontal Boundary:</i> Disclosure if economies of scale and/or economies of scope exist and the sources of economies of scale and scope (such as scale and/or scope benefits from procurement, synergies, marketing, research and development, inventory management etc.)	0.455	73.04
<i>Vertical Boundary:</i> Disclosure about the customer (downstream) relationships; the extent of customization the company offers its customers and if the company sells direct to end customers or wholesalers, and some sort of identification of who the customers are	0.431	92.65
<i>Positioning (cost):</i> Disclosure on how the firm is managing its costs	0.407	75.00
<i>Dynamics:</i> Disclosure on any barriers to imitation (e.g. Patents, regulation, trademarks, social complexity, historical circumstance)	0.394	41.67
<i>Technology:</i> Disclosure about the level of quality control	0.373	80.88
<i>Positioning (focus):</i> Disclosure on the market characteristics the firm is targeting (demographic, location etc)	0.330	79.90
<i>Vertical Boundary:</i> Disclosure about the supplier (upstream) relationships; if the company relies on one specific supplier sources or multiple suppliers sources; and/or the extent of supplier relationship and how much the company depends on the suppliers	0.328	64.71
<i>Structure:</i> Disclosure on how the activities within the company are coordinated and controlled	0.318	38.24
Market: market: % of market share for the industries the company competes in	0.305	4.180
Eigenvalue: 3.91;		
Variance explained: 10.02 %		
<i>Panel B: Forecast</i>		
<i>Forecast:</i> Disclosure of qualitative forecast of profit	0.781	49.02
<i>Forecast:</i> Disclosure of quantitative forecast of sales	0.743	22.55
<i>Forecast:</i> Disclosure of quantitative forecast of profit	0.742	20.10
<i>Forecast:</i> Disclosure of qualitative forecast of sales	0.694	57.35
<i>Forecast:</i> Disclosure of the assumptions underlying the forecast	0.667	48.04
Eigenvalue: 2.97;		
Variance explained: 7.62 %		

(continued)

Disclosure item ranked by factor loading	Factor loadings	% of firms disclosing
<i>Panel C: Goals and objectives</i>		
<i>Goals and Objective:</i> Disclosure about the operational targets in qualitative terms	0.636	58.33
<i>Examples:</i> Disclosure of a concrete strategy example(s) next year	0.553	46.08
<i>Goals and Objectives:</i> Disclosure about the operational targets in quantitative terms	0.519	10.29
<i>Horizontal Boundary:</i> Disclosure on the quantities produced of the various products and services	0.428	44.12
<i>Culture:</i> disclosure on collectively held, within the firm, values and/or culture and/or norms and/or behavior and/or vision and/or mission	0.386	72.77
<i>Examples:</i> Disclosure of a concrete strategy example(s) last year	0.382	92.16
<i>Forecast:</i> Disclosure of the assumptions underlying the forecast	0.351	48.04
<i>Market:</i> Competition: major competitors: the name of any of the major competitors	-0.307	23.04
Eigenvalue: 2.20, Variance explained: 5.63 %		
<i>Panel D: Boundaries</i>		
<i>Corporate Boundary</i> (diversification): Disclosure about the geographical market(s) and a brief discussion of these	0.582	97.55
<i>Corporate Boundary</i> (diversification): Disclosure about the industry(s) the company operates in and a brief discussion of these	0.541	99.02
<i>Structure:</i> Disclosure on how the activities within the company are coordinated and controlled	0.431	38.24
<i>Horizontal Boundary:</i> Disclosure on the quantities produced of the various products and services	0.360	44.12
<i>Forecast:</i> Disclosure of order book or backlog information	-0.490	13.24
Eigenvalue: 1.82, Variance explained: 4.65%		

Table II.

**Table III.**  
Descriptive  
statistics –  
independent  
variables ( $n = 204$ )

Country-level variables	Minimum	Maximum	Mean	SD	Skewness
Country cluster	1	3	1.750	0.597	0.149
Country financial transparency	-0.590	1.620	0.676	0.541	0.230
Country secrecy	-2.100	1.080	-0.632	1.032	0.149
Country secrecy (Braun and Rodriquez measure)	26	69	48.500	11.920	-0.149
<i>Firm-level variables</i>					
Disclosure Propensity	-2.351	5.241	0.000	1.000	0.561
Size US\$m (natural log of total assets)	4.710	12.380	8.580	1.780	-0.050
Leverage (total liabilities/total assets)	0.001	1.390	0.564	0.206	-0.320
Change in ROA	-18.150	147.140	1.081	10.864	12.189
Number of segments	1	11	3.696	1.869	1.030
Debt Raised in 2006	0	1	0.431	0.496	0.279
Equity Raised in 2006	0	1	0.314	0.465	0.809
Big 4 Auditor	0	1	0.920	0.270	-3.159
Cross-listed on NYSE	0	1	0.123	0.329	2.319

score for change in ROA is 1.081. The number of segments varies between 1 and 11. In the firms sampled, 43.1 per cent raised debt and 31.4 per cent raised equity in the following year (2006). In all, 92 per cent of the firms were audited by a Big 4 auditor, reflecting that the sample contains very large firms. In all, 12.3 per cent of the firms were cross-listed on the New York Stock Exchange.

### 5.2 Regression analysis of strategy disclosure

Table IV (Models 1-5) shows results for total disclosure score and each of the four PCA components regressed on our independent country-level and firm-level variables. All regressions include eight SIC industry fixed effects.

Model 1 shows that, as predicted, total disclosure score is significantly positively associated with country cluster, country financial transparency and is significantly negatively associated with country-level secrecy. Firm-level disclosure propensity, Big 4 auditor and NY listing are also significantly positively associated with total disclosure score, as predicted. Similar results occur in Model 2 for the component *Internal Organization and Competition* except that Secrecy is now only marginally significant. The results for the remaining three components depart more from this. In Model 3, *Forecasts* is only significantly associated with country cluster and with secrecy, while of the firm-level variables, only auditor is significantly positive. In Model 4, *Goals and Objectives*, only firm-level reporting incentives and auditor type are significant and positive. Finally, in Model 5 *Boundaries*, only country financial transparency is significantly positive. In short, Model 1 (total disclosure score) strongly supports all our hypotheses, but as each of the four components which make up the total score are examined, support for the hypotheses deteriorates as the correlation between each component dependent variable and the total disclosure score falls.

### 5.3 Country-level versus firm-level characteristics

To examine whether country-level characteristics or firm-level characteristics are more important in explaining variation in strategy disclosure, we run separate regressions for country variables and firm variables (industry fixed effects are always included). We then compare the  $R^2$ s between the models that include country variables and the models that contain firm variables. Table V, Panel A covers the country-level variables as regressors,

Variables	Prediction	Model 1		Model 2		Model 3		Model 4		Model 5	
		Total disclosure score Coefficient	$p >  t $	Internal organization and competition Coefficient	$p >  t $	Forecasts Coefficient	$p >  t $	Goals and objectives Coefficient	$p >  t $	Boundaries Coefficient	$p >  t $
(Constant)		16.115***	0.001	-0.961***	0.005	-1.273***	0.001	-0.334	0.395	-0.183	0.611
Country cluster	+	1.646***	0.001	0.249**	0.011	0.487***	0.001	-0.111	0.612	-0.248	0.985
Country financial transparency	+	1.113**	0.035	0.344***	0.004	-0.117	0.786	-0.02	0.553	0.492***	0.001
Country secrecy	-	-0.661**	0.016	-0.092*	0.077	-0.173***	0.009	0.096	0.911	-0.043	0.264
Firm disclosure propensity	+	0.966***	0.001	0.212***	0.001	0.027	0.359	0.122*	0.052	-0.047	0.753
Big 4 Auditor	+	3.797***	0.001	0.555***	0.008	0.465**	0.038	0.702***	0.005	-0.146	0.726
New York Listed	+	2.051**	0.012	0.546***	0.002	0.018	0.467	0.126	0.282	0.161	0.789
Industry fixed effects		Included		Included		Included		Included		Included	
N		204		204		204		204		204	
F <sub>statistic</sub>		7.49***		8.18***		2.80***		2.17*		5.34***	
R <sup>2</sup>		0.339		0.315		0.161		0.129		0.270	
Adjusted R <sup>2</sup>		0.294		0.311		0.104		0.070		0.220	

Notes: All models are significant (Prob > F is lower than 0.05) \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ , Probabilities on signed variables are one-tailed. In all models, maximum VIFs are less than 2.0

Table IV.  
OLS regressions

**Table V.**  
OLS Regressions by  
country and firm  
determinants

Variables	Prediction	Model 1		Model 2		Model 3		Model 4		Model 5	
		Total disclosure score	Internal organisation and competition	Forecasts	Goals and objectives	Boundaries	Coefficient	$p >  t $	Coefficient	$p >  t $	Coefficient
<i>Panel A: Country determinants</i>											
(Constant)		15.687***	-1.615***	-0.880	0.003	-0.880	-0.066	0.913	0.996*	0.064	
Country cluster	+	1.707***	0.270***	0.478***	0.010	0.478***	-0.109	0.195	-0.255**	0.013	
Country financial transparency	+	2.049***	0.555***	-0.087	0.001	-0.087	0.086	0.277	0.483***	0.001	
Country secrecy	-	-0.954***	-0.146**	-0.197***	0.016	-0.197***	0.052	0.246	-0.037	0.293	
Industry fixed effects		Included	Included	Included		Included			Included		
N		204	204	204		204			204		
F-statistic		5.45***	6.53***	3.28***		3.28***	1.56		6.93***		
R <sup>2</sup>		0.22	0.253	0.145		0.145	0.075		0.264		
Adjusted R <sup>2</sup>		0.18	0.214	0.101		0.101	0.027		0.226		
<i>Panel B: Firm determinants</i>											
(Constant)		15.988***	-1.452***	-0.618	0.006	-0.618	-0.604	0.301	0.851	0.133	
Firm disclosure propensity	+	4.041***	0.612***	0.459**	0.005	0.459**	0.659**	0.006	0.005	0.492	
Big 4 Auditor	+	2.490***	0.665***	-0.004	0.001	-0.004	0.094	0.33	0.362**	0.041	
New York Listed	+	1.311***	0.289***	0.060	0.001	0.060	0.100*	0.082	0.019	0.393	
Industry fixed effects		Included	Included	Included		Included			Included		
N		204	204	204		204			204		
F-statistic		7.14***	8.37***	1.45		1.45	2.57***		4.05***		
R <sup>2</sup>		0.270	0.303	0.07		0.07	0.118		0.174		
Adjusted R <sup>2</sup>		0.232	0.266	0.022		0.022	0.072		0.131		
Vuong test		Z-statistic	Z-statistic	Z-statistic	$p >  z $	Z-statistic	Z-statistic	$p >  z $	Z-statistic	$p >  z $	
		-0.727	-0.846	1.845*	0.398	1.845*	-1.24	0.215	2.0376**	0.042	

**Notes:** All models are significant (Prob > F is lower than 0.05), except Model 4, Panel A and Model 3, Panel B; \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ . Probabilities on signed variables are one-tailed. In all models, maximum VIFs are less than 2.0

and total disclosure score (Model 1) and the four components (Models 2-5) as regressands. Similarly, Table V, Panel B covers the firm-level variables as regressors on total disclosure score (Model 1) and the four components (Models 2-5). For total disclosure score, firm-level variables explain more variation than country-level variables do: the  $R^2$  of Model 1 in Panel A is 0.220 and lower than the  $R^2$  of 0.270 in Model 1, Panel B. The results for the two components *Internal Organization and Competition* and *Goals and Objectives* (Models 2 and 4, respectively, in Panels A and B) also show that firm-level variables matter more than country-level variables. However, our results for the other two components, *Forecasts* and *Boundaries* (Models 3 and 5, respectively, in Panels A and B), show the opposite: that country-level variables matter more than firm-level variables. We use the Vuong statistic to formally test the difference in explanatory power between the models based on country variables *vis-à-vis* models based on firm variables. We are unable to formally reject the equivalence of the models for total strategy disclosure and for *Internal Organization and Competition* and *Goals and Objectives*. The results for *Forecasts* and *Boundaries* show, respectively, marginally significantly and significantly better explanatory power for country-level than for firm-level variables. Furthermore, when comparing the explanatory power of the models in Table V where country-level variables and firm-level variables are regressed separately, none shows higher explanatory power than any of the respective models in Table IV where both types of variables are included.

To sum up, both country-level factors and firm-level factors matter for strategy disclosures. Which of the country-level factors and firm-level factors dominates in terms of explanatory power tends to be specific to each component of strategy disclosure. Country-level factors and firm-level factors are complements – although not necessarily fully complementary – rather than substitutes, because the explanatory power of the Models in Table IV, where both type of variables are included, is always much higher than either of the respective models in Table V where the two types of variables are regressed separately.

#### 5.4 Sensitivity analyses

We reran the analyses of Table IV replacing our secrecy measure with that provided by Braun and Rodriguez (2008) and replacing firm-level disclosure propensity with its six underlying variables. Overall, the results (untabulated) for country-level variables are similar although not identical to those in Table IV. The results for auditor type and New York listing are identical to Table IV. Of the six variables in disclosure propensity, firm size and number of business segments are significant in several regressions, but no variable is significant across all regressions. Explanatory power is thus lost by breaking down disclosure propensity into its six components.

## 6. Conclusions

Little has been known previously about voluntary strategy disclosure in annual reports, despite the importance of strategy in understanding a firm's performance. We examine the determinants of voluntary strategy disclosures measured using a 40 item checklist in 204 companies' annual reports for 2005 across 12 countries.

We predicted and found that voluntary strategy disclosures will be made by companies from stakeholder-oriented countries, from countries with higher levels of country-level transparency, lower secrecy. Higher firm-level disclosure propensity, auditor-type and NYSE listing were also predicted and found to be positively associated with strategy disclosure. While the results are not always consistent across sub-components of strategy disclosure, country-level and firm-level variables are complements rather than substitutes.

Our findings may assist regulators. There appear to be particular country-level and firm-level factors associated with voluntary disclosure of strategy information. Given that strategy disclosure is still ultimately a voluntary and not a mandatory disclosure, and in light of the country-level and firm-level differences we document, it appears that widespread voluntary adoption of such disclosures by all companies is unlikely. Therefore, regulatory intervention might be required to see more widespread adoption of strategy disclosure.

The study has some limitations. First, the 17 largest companies by market capitalization from each country are studied, after excluding financial institutions and companies without English language annual reports. The study is thus biased towards larger and more internationally focused companies. Country-level factors may be more important determinants of strategy disclosure for smaller companies. Second, our data from 2005 appear dated. However, the differences between countries that we examine are either of an institutional or a cultural nature. As these change slowly, such differences between countries very likely exist today. Third, the adjusted  $R^2$ s for all our models are below 0.35 suggesting that other country-level or firm-level variables could also explain strategy disclosure. Fourth, hand-collecting data, necessary to get information on strategy disclosure, is costly and time-consuming. While this allows for a data set containing rich information, it necessarily also limits the sample size and the number of countries covered.

#### Notes

1. Surveys (Ho and Wong 2004) and financial statement analysis textbooks (Palepu *et al.*, 2004) support this view.
2. Australia, Canada, Hong Kong, Malaysia, Norway, Singapore, the UK and the USA.
3. Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Japan, Netherlands, South Africa, Sweden, Switzerland and Taiwan.
4. Greece, Italy, India, Indonesia, Korea, Pakistan, Philippines, Portugal, Spain and Thailand.
5. Empirically, listing status and voluntary disclosure are complements, not substitutes (Hossain *et al.*, 1995). We investigate cross-listing on the NYSE because it is prestigious and thus likely to produce a demand for strategy disclosure.
6. Available from the authors on request.
7. Unweighted scores are used because (a) of the subjectivity in assigning weights; (b) Chow and Wong-Boren (1987) find similar results using weighted and unweighted disclosure scores.
8. Many index items are significantly correlated, suggesting the presence of latent variables. The Kaiser–Meyer–Olkin test statistic is 0.611, indicating data suitable for factoring (Tabachnik and Fidell, 2013).
9. [www.gert-hofstede.com](http://www.gert-hofstede.com)
10. Using parallel analysis, *Secrecy* is the only statistically significant component.
11. [www.adrbny.com](http://www.adrbny.com)
12. Using parallel analysis, only this first component is statistically significant. All but one variable loads positively.
13. The Total Disclosure Score was not normalised, but similar results occur if it was.
14. Therefore, the item was omitted from the PCA and Table II. Internal grouping (97.55 per cent) and demand conditions (90.69 per cent) are frequently disclosed but do not appear in Table II because they fail to load significantly in the PCA.



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